Recognition of nonrandom patterns on supply performance by employing statistical monitoring

ABSTRACT

This paper introduces a practical methodology of assign able signals and Run chart tests for identification of nonrandom patterns of supplier performance by statistical monitoring. The assumption of normal distribution is one of the important factors to implement a control chart in industry and service. It is supposed that natural data shows lack of any nonrandom pattern signals or out of control points on control chart. The data of supplier's on-time delivery for automotive industry has been gathered and illustrated on control chart by employing appropriate transformation and assignable signals and run chart were tested on the control chart accordingly. The results show that tests were able to identify nonrandom patterns of supplier performance data. Out of control signals were removed from the control chart and show that on-time delivery performance was increased accordingly. The control chart with natural pattern can be used as pilot for m onitoring supplier delivery over time and improve supplier delivery performance.

Keyword: Run chart pattern recognition; Johnson transformation; Supply performance; Statistical process control; Anderson-darling test; On-time delivery